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The Journal of the South Carolina Medical Association

OFFICIAL ORGAN OF THE SOUTH CAROLINA MEDICAL ASSOCIATION
OFFICE OF PUBLICATION — FLORENCE, SOUTH CAROLINA

VOLUME XLIX | MARCH, 1953 | NUMBER 3

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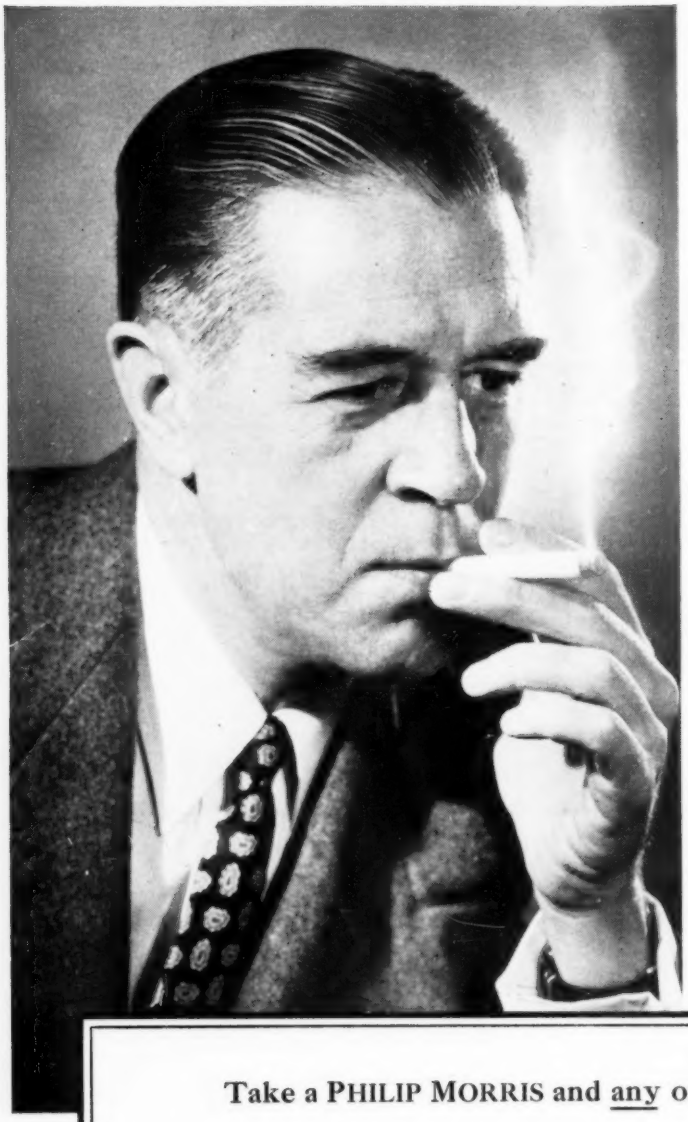

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Published monthly, by The South Carolina Medical Association, 105 West Cheves Street, Florence, South Carolina

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under Act of Mar. 3, 1879. Accepted for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized Aug. 2, 1918.

The Journal
of the
South Carolina Medical Association

VOLUME XLIX March, 1953 NUMBER 3

Pregnancy With Sickle Cell Anemia*

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AND
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Columbia, S. C.

There has been a definite increase in the literature on pregnancy with sickle cell anemia since one of the authors[2] published a paper three and a half years ago, at which time only 29 proven cases had been reported. Our views have altered somewhat now that additional cases have been studied. In reviewing the literature there have been same 67 cases[1-13] reported, to which we wish to add four additional cases.

Case Reports

Case 1.—(No. 21838). This 19 year old Negro, para 1 gravida 2, was first admitted to the hospital in her seventh month of pregnancy, complaining of "labor pains." Family history was non-contributory. Past history revealed that she had had "rheumatism" in both legs since early childhood. Her previous pregnancy had been normal with spontaneous delivery at term. The child was now two years old and in good health.

Temperature on admission was 100° F., respirations 20, pulse 88, and blood pressure 120/70. The sclerae were icteric, conjunctival and mucous membranes pale. The heart was not enlarged. There was a harsh blowing systolic murmur over the precordium, more pronounced in the second left interspace. The abdomen was distended;; the fundus extending three finger breadths above the umbilicus. Contractions were very irregular and mild; the presenting part not engaged.

Laboratory data showed red blood count of 2.2 million, hemoglobin 40%, white blood count 13,500 with 72% polymorphonuclears, 28% lymphocytes, and 4 normoblasts per 100 white blood cells. There was 10% immediate sickling of red blood cells and 95% in 72 hours in the sealed wet smear. Icterus index was 75. Voided urine specimen showed a specific gravity of 1.010, 1+ albumen, 1-2 RBC/h.p.f., 35-40 WBC/h.p.f.

On bed rest and mild sedation all uterine contractions and pain subsided. The patient was put on penecillin, iron, and vitamins. She was given a total of 1,750 cc whole blood in seven transfusions of 250 cc each.

She was discharged on the 17th hospital day, at which time her red blood count was 3.2 million, hemoglobin 60%, and icterus index 25.

The patient was readmitted two weeks later for more blood transfusions. Physical findings were essentially the same as on the previous admission.

Laboratory data showed a red blood count of 2.7 million, hemoglobin 51%, and icterus index 45.

Over a 14 day hospitalization, she received 5 blood transfusions of 250 cc each and was discharged with a hemoglobin of 60%.

The patient was readmitted at term and in active labor three weeks later. Again general physical findings were essentially the same as before.

The patient had a normal 8-10 hour labor and a spontaneous delivery of a normal living female infant under local anesthesia. Oxygen was administered during the second stage of labor.

On the first post partum day, the red blood count was 2.5 million, hemoglobin 47%, and icterus index 20. She had a persistent 1+ albuminuria and frequent episodes of pyuria.

On the fifth post partum day, bilateral tubal ligation,, Pomeroy method, was carried out under local anesthesia.

The patient had an essentially uneventful post partum and post operative course, and was discharged on the tenth post partum day.

Case 2.—(No. 19438). This colored female was first admitted to the hospital at the age of 15, complaining of pain in arms, legs, and joints of 5-6 weeks duration. The joints had not been hot or swollen. She gave a history of asymptomatic jaundice just prior to the onset of pain in the extremities.

Past history revealed mumps at age 7 years, chicken pox at age 10 years, and several attacks of tonsillitis before tonsillectomy at age 11 years.

Family history was non-contributory.

*Presented before a joint meeting of the North Carolina and South Carolina Obstetrical and Gynecological Societies, Southern Pines, North Carolina, April 1952.

Temperature on admission was 99.8° F., pulse 90, blood pressure 120/60, weight 91 lbs., and height 65 inches. The patient was asthenic and in no acute distress. Mucous membranes were pale. There was a full grown cataract on the left eye. There was generalized moderate lymphadenopathy. The heart was enlarged to the left, extending almost to the anterior axilliary line. There was a loud blowing apical systolic murmur. Extremeties were negative; reflexes physiological.

Laboratory findings revealed hemoglobin 45%; white blood count 15,900 with 70% polymorphonuclears; urine was negative.

Serological tests for syphilis were positive. There was 10% immediate sickling of the red blood cells. Fluroscopic examination of the heart revealed straightening of the left border, marked enlargement of the left ventricle, and some compression of the esophagus by the right atrium.

X-ray of the right clavicle and left knee revealed no evidence of bone or joint disease or injury.

Electrocardiogram revealed sagging of the RST segment in leads 2 and 3 with slightly prominent Q wave in lead 3.

The patient received several blood transfusions and a total of 8,200,000 units of penecillin over a three week period. She was asymptomatic on discharge.

The patient was next seen four months later, when she was readmitted to the hospital, having been referred by an out of town physician for treatment of toxemia and delivery. Her LMP was not known, but she was reported to be at term with her first pregnancy. Her prenatal course was reported to have been essentially uneventful until the gradual onset of toxic symptoms during the previous three weeks. During this time she had excessive weight gain, increasing edema, albuminuria, and slowly rising blood pressure. The patient was given five blood transfusions, for anemia, during this period.

Temperature, on admission, was 99° F., pulse 104, respirations 18, and blood pressure 154/110. General physical examination was essentially the same as on her first admission with the exception that the uterine fundus extended to a point midway between the umbilicus and the xiphoid. There was 1+ pitting pre-tibial and ankle edema. The heart was still enlarged. Rate was rapid and rhythm regular. There was a loud blowing, precordial, systolic murmur. The lungs were clear.

Admission laboratory data showed a red blood count of 2,710,000, hemoglobin 55%, white blood count 10,200 with 69% polymorphonuclears, 31% lymphocytes, and 9 normoblasts per 100 white blood cells. Reticulocyte count was 50 per 1,000 red blood cells. Icterus index was 50. Urine was negative except for a trace of albumen, occasional red and 4-6 white blood cells per h.p.f. Urinalysis the next day, revealed 2+ albumen, 15-20 red and 8-10 white blood cells per h.p.f. There was 20% sickling of the red blood cells in 72 hours.

Approximately one-half hour after admission the patient complained of a headache and within ten minutes was having an eclamptic convulsion. She had four more convulsions during the next seven hours despite intensive treatment with morphine, sodium luminal, 50% magnesium sulphate and intravenous hypertonic glucose solution. Blood pressures averaged 160/110.

On the second morning, the patient started having irregular uterine contractions. Heavy sedation was continued and under light ether anesthesia, that afternoon, the patient had spontaneous delivery of a normal living female infant.

Respirations continued to be rapid and shallow, and the pulse rate remained rapid despite moderate sedation for 48 hours post partum. The patient was digitalized on the second post partum day despite lack of conclusive evidence of heart failure.

The patient had a febrile course which reached a peak of 102.6° F. on the first post partum day and gradually returned to normal on the fifth post partum day. She was on penicillin therapy.

The patient's eclampsia improved following delivery. The blood uric acid level fell from 9 mgm. on the day of delivery to 4.1 mgm. on the third post partum day. Her blood pressure returned to normal on the fourth post partum day.

There was considerable increase in blood destruction following delivery. Hemoglobin dropped from 55% before delivery to 40% on the fourth post partum day. Icterus index rose from 50 before delivery to 85 on the second post partum day. Two transfusions were given but, the hemoglobin did not rise above 45%.

On the fifth post partum day, all attempts to give transfusion failed except by "cut-down" on the posterior tibial vein. Blood in all superficial veins seemed to be thick, black, and viscid.

The patient pursued a steady downhill course with a continuous rapid pulse, rising to 140 terminally. Death occurred quietly early in the morning of the sixth post partum day. Permission for a necropsy could not be obtained.

Case 3.—(No. 19779). This eighteen year old gravida 1 was admitted to the hospital in her eighth month of pregnancy complaining of general malaise, headache, weakness and severe periumbilical shooting pains of three days duration.

The patient's family history and past history were non-contributory except for a history of "rheumatism" involving all joints of the extremities intermittently since the age of seven.

She had been seen in the prenatal clinic three months before this admission and found to be in good health. She was given iron for a moderate anemia—hemoglobin 65%, red blood count 3.4 million.

On admission, temperature was 98.6° F., pulse 84, respirations 18, and blood pressure 110/80. Sclerae

and mucous membranes were pale and had an icteric tint. The lungs were clear. The heart was negative except for possible slight enlargement to the left. The uterine fundus extended to a point five finger breadths below the xiphoid. There were no abnormal masses, abdominal tenderness, or uterine contractions. There was no edema.

Laboratory data showed a red blood count of 2.4 million, hemoglobin 40%, white blood count 9,100 with 80% polymorphonuclear leucocytes, 20% lymphocytes, and two normoblasts per 100 white blood cells. Reticulocyte count was 56 per 1,000 red blood cells. Icterus index was 50. Blood serology was negative. Urinalysis revealed 1+ albumen and 6-8 white blood cells per H.P.F. X-rays of the skull showed no evidence of bone changes compatible with sickle cells anemia.

The patient was given iron, and blood transfusions in 250 cc amounts. After six transfusions over a period of two weeks, symptoms had subsided, and the red blood count was 3.7 million, hemoglobin 70%, and icterus index 25.

After three weeks of treatment, medical induction of labor was successful, and a low forcep delivery of a normal female infant, weighing 6 lbs., 7 oz., was carried out under pudendal block anesthesia. Estimated blood loss was 200 cc.

On the second post partum day, the red blood count was 3.4 million, hemoglobin 65%, and icterus index 20.

The patient was given two more blood transfusions and on the eighth post partum day bilateral ligation of the fallopian tubes was carried out under local anesthesia.

She had an uneventful post-operative course. After another blood transfusion, the red blood count was 3.6 million and hemoglobin 70%. The patient was asymptomatic when discharged on the eighth post-operative day.

Case 4.—(No. 25174). This twenty-three year old para 1 gravida 2 was first seen in the obstetrical clinic during her fourth month of pregnancy, complaining of generalized weakness, "dizzy spells," and fainting of three or four weeks duration.

She gave a history of being treated for rheumatic fever five years previously. She had had an apparently normal pregnancy and delivery three years previously. During the past year she had been hospitalized on two occasions for treatment of sickle cell anemia.

On examination temperature was 99.4° F., pulse 88, respirations 20, blood pressure 110/68, and weight 121 lbs. Mucous membranes were pale. There was a loud systolic murmur heard over the entire precordium. The uterine fundus was enlarged to a point two finger breadths below the umbilicus.

Laboratory data showed a red blood count of 2.25 million, hemoglobin 40%. Urine was negative except for 8-10 white blood cells per H.P.F.

The patient was admitted to the hospital for further study and blood transfusions.

Electrocardiogram revealed no important abnormalities. Chest X-ray revealed the cardiac shadow at the upper limits of normal in the transverse diameter with a cardio-thoracic ratio of 14/27. There was 1% immediate sickling of the red blood cells and 40% in 72 hours. There were 65 reticulocytes per one thousand red blood cells. Icterus index was 15.

The patient was given a total of 1,000 cc of whole blood at the rate of 250 cc per day. On discharge the patient was asymptomatic and had a hemoglobin of 54%.

The patient was readmitted to the hospital in her eighth month of pregnancy complaining of generalized weakness and severe pain in the lower extremities. Pains seemed to be worse in the distal halves of both tibia.

General physical examination was essentially the same as before except for exquisite tenderness over the distal halves of the tibia.

Red blood count was 2.25 million, hemoglobin 42% or 6.5 grams, 90 reticulocytes per 1,000 red blood cells, and icterus index 10.

X-rays of the long bones showed no evidence of bone disease. Some coursening of the trabeculation of the lumbar vertebra was noted. Films of the skull showed several small rounded radiolucent shadows throughout the calvarium. None of these shadows were characteristic of sickle cell anemia but were compatible with the diagnosis.

After receiving a total of 1,000 cc whole blood the patient's hemoglobin rose to 51%. She became asymptomatic and was discharged.

The patient was next admitted in active labor three weeks before the estimated date of confinement.

Physical findings were essentially the same as on previous admissions with the exception that the liver edge was palpable just below the right costal margin. Temperature, pulse, respirations, and blood pressure were all normal.

After a fairly short, normal labor, the patient had a spontaneous delivery of a 5 lb., 11 oz. male infant. The infant appeared to be normal and in good condition.

Post partum laboratory studies showed a red blood count of 2.7 million, hemoglobin 54%, and white blood count 12,000 with 66% polymorphonuclears. There were 50 reticulocytes per 1,000 red blood cells. Icterus index was 20. There was 1% immediate sickling of red blood cells, and 50% in 72 hours. Urinalysis was negative except for a trace of albumen.

The patient was given 500 cc of whole blood. She had an uneventful and afebrile post partum course except for one spike in temperature to 101.6° F. on the first post partum day. She was discharged on the eighth post partum day.

This patient was again hospitalized and treated for sickle cell anemia two months post partum. On this admission, the sclerae had an icteric tint. The red blood count was 2.6 million, hemoglobin 51%, 4 normoblasts per 100 white blood cells, and 10% immediate sickling of the red blood cells. Icterus index was 40. After blood transfusions, the patient became asymptomatic and was discharged.

Sickling of the red cells is an hereditary abnormality found in 7-14% of American Negroes.[14,15,16] It is transmitted as a dominant Mendelian factor.[17,18,19] There are two forms of sickle cell disease: (1) Sicklemia in which there is sickling of the cells but no evidence of blood destruction or regeneration, and (2) sickle cell anemia in which there is not only sickling, but also active blood destruction as manifested by clinical icterus, elevated icterus index, or increased urinary urobilinogen, and such evidence of increased regeneration as reticulocytosis and nucleated red cells.

A previous study of sicklemia or sickle cell trait associated with pregnancy[16] indicates that it produces little alteration from the normal during the course of pregnancy, labor, and the puerperium. However, further work along these lines is needed to confirm this conclusion.

A moderate degree of anemia plus sickling of the red cells is not sufficient evidence to make a diagnosis of sickle cell anemia. There must be evidence of blood destruction and or increased regeneration to support this diagnosis.

From time to time, the blood destructive process appears to be accelerated and may be accompanied by episodes af aching and pain in the joints or extremities. There may be severe abdominal pain with accompanying prostration and muscular rigidity simulating one of the acute abdominal accidents requiring surgical intervention.[20] A clinical picture simulating coronary occlusion has been observed.[21] These episodes of apparent acceleration are sometimes referred to as "crises."

For a most complete dissertation on the diagnosis of sickle cell anemia with pregnancy, the article by Beacham[22] is an excellent one.

Table I shows a summary of the outcome of the cases reported through 1951, and including the four we are adding.

Table I

Number of Mothers	71
Maternal Deaths	17 or 24%
Total Number of Pregnancies	138
Abortions	21 or 15%
Number of Viable Infants	116
Number of Infants Surviving	93
Deaths of Viable Infants	23 or 20%
Total Fetal Loss	47 or 34%

In addition to the data in Table I, it has been stated that there is a marked increase in premature labor, stillbirths, morbidity, toxemia,[2] and urinary infections[22] in the sickle cell anemia patient. From both personal experience and in studying individual case reports, our impression is in agreement with the above, although valid statistical data could not be compiled due to the incompleteness of many case reports.

Many studies are lacking which should be done before a comprehensive report of this problem can be presented. There is no comparison of the longevity of the non-gravid and gravid sickle cell patient in the childbearing age, nor is there a comparison of the incidence of "crises" in these same patients. There is no reference to the effect of operative procedures or anesthesia upon sickle cell patients.

It is well known that acute infection of any type often precipitates "crises" in sickle cell patients. The fact that many of the gravid sickle cell patients had never been previously diagnosed until the occurrence of a "crisis" during pregnancy suggests that pregnancy itself may precipitate a "crisis." One case reported[2] was followed with serial icterus indices and blood counts throughout the course of labor. Increasing icterus index and correlating fall in the red count and hemoglobin indicated increased blood destruction. Further investigation should be done to confirm or refute this finding: Three cesarean sections and two therapeutic abortions have been done. One section patient died in shock six hours postoperatively. The other patients apparently tolerated operation without difficulty. A decrease in oxygen tension causes an increase in sickling of the red cells[23] with increased viscosity and possibly localized or generalized stasis. The added physical effort of labor and the use of anesthesia would likely increase sickling.

Comment

The treatment of sickle cell anemia itself is totally unsatisfactory. If and when some satisfactory means of treating this disease is discovered, it will undoubtedly be found by the hematologist and internist. Thus it would appear that the obstetrician should place his emphasis upon recognition of and the handling of the problems most often seen when associated with pregnancy.

Our problems are manifold as can easily be seen from the numerous complications which arise. Correction of the anemia is entirely dependant upon the availability of blood in generous quantities. All of the various hematinics such as iron, liver, folic acid, B_{12}, etc. appear to have little or no effect upon the anemia. And again, the use of whole blood is not entirely without danger. There is a high incidence of transfusion reactions in this disease, particularly during "crises." Frequent small transfusions have been recommended as a means of lowering this high incidence. The use of washed red cells rather than whole blood might possibly help. Despite the more frequent reactions, blood remains our chief weapon of defense.

Correction of the anemia along with adequate prenatal care may reduce the incidence of premature labor, stillbirths, morbidity, and toxemia. Prophylactic antibiotic therapy during labor and immediately postpartum has been suggested.[1]

Continuous oxygen and local anesthesia for delivery is recommended to lessen the chances of increased sickling during delivery.

Of the 71 cases reported, 17 or 24% have died. This represents a high maternal mortality irrespective of what the circumstances are. This figure is probably higher than it should be in that the more severe cases, particularly deaths, are most apt to find their way into the literature. One of the major immediate causes of death in these patients is congestive heart failure. Consideration of prophylactic digitalization of patients in a "crisis" has some merit. Klinefelter[24] has stated that the heart failure associated with sickle cell anemia does not respond to digitalization. However there is no evidence that digitalization would be harmful in any way, and we believe it is worthwhile in selected cases.

In any condition with the relatively high maternal mortality and the low fetal salvage seen in sickle cell anemia, therapentic abortion should be discussed. In view of the lack of the detailed studies mentioned before, and the fact that an abortion is probably as dangerous to the patient as a delivery, we can see nothing to be gained by a therapentic abortion.

The decision to sterilize or advise adequate contraception in these patients presents a different problem. A 24% maternal mortality and a 34% fetal loss does not contribute a favorable prognosis for any pregnancy. Busby and Anderson[1] state that sterilization will rarely be necessary since patients with sickle cell anemia have an average number of only two pregnancies and some 20% of the pregnancies terminate in abortion. This statement represents a false premise in that several patients have gone through two and three pregnancies safely, only to die during their third or fourth pregnancy. And again we do not consider the frequency of abortions a valid reason not to sterilize these patients. We do not feel that an abortion with its frequent attendant hemorrhage would be a pleasant situation in a patient who has a hemolytic type of anemia. Since pregnancy constitutes an added burden in an already sick person, and since pregnancy may exert an adverse influence on the disease, we believe sterilization or adequate contraception is indicated.

Summary

We, as individuals, do not have the laboratory facilities and adequate records to attempt the original work that is needed to adequately study this problem. Such studies would best be carried out in our teaching institutions. The essentials of proper care at the present time consist only of blood transfusions and adequate prenatal care. Maternal mortality is high and the fetal salvage is poor. With the information available at present, there seems to be no indication for therapentic abortion, but our personal feeling is that these patients should not be exposed to the added burden of pregnancy and should be sterilized or use adequate contraceptive measures.

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Ethyl Biscoumacetate (Tromexan) in Coronary Artery Disease

A PRELIMINARY REPORT

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In the management of myocardial infarction, there is considerable evidence to suggest that anticoagulants are of value.[1,2,3]

Dicoumarin ("Dicumarol") has probably been the most widely used oral anticoagulant in the past.

However, dicoumarin possesses the disadvantage of rather slow action. The maximum response occurs at the end of the second or third day after a dose is given; the effect of the drug may continue for ten days.[3]

Recently, a shorter-acting oral anticoagulant has become available.[3,4,5,6] This drug is known as ethyl biscoumacetate and is marketed under the trade name "Tromexan." Chemically, the drug is 3,3' carboxymethylenebis (4-hydroxycoumarin) ethyl ester.

An initial "anticoagulating" dose of ethyl biscoumacetate has been found to reach its peak of action in 24 to 36 hours;[4] the prothrombin time returns to normal within 48 to 60 hours, if no further medication is given.

The purpose of the present study was to attempt to determine whether the drug would prove satisfactory for ordinary clinical use in our hands.

Material and Methods

Our material consisted of six cases, all of whom complained of chest pain, exhibited ST segment changes in the electrocardiogram, and had other findings suggestive of acute myocardial damage due to coronary artery disease.

Prothrombin determinations were done each morning by the plasma dilution method.[7]

Two cases are presented in detail. All six cases are summarized in the appended table.

Illustrative Cases

Case I. Mrs. M. B., a 54 year old, white, female, diabetic was admitted to the Spartanburg General Hospital, March 19, 1952 complaining of severe chest pain. She stated that the day prior to admission, she had developed retrosternal pain which "cut my breath off," and radiated down the left arm. Subsequently, she developed anorexia, nausea, vomiting, and drowsiness.

For several years, the patient had required 30 units of insulin three times a day.

Physical examination revealed an elderly woman who appeared acutely ill. Blood pressure was 110 mm. systolic, 85 mm. diastolic. Pulse rate was 110 per minute. Respirations were 24 per minute. Temperature was 99.8 degrees. There were bilateral cataracts. The heart was enlarged to the left anterior axillary line; heart tones were of poor quality with "tic-tac" rhythm. Auscultation of the lungs revealed a few fine, bubbling rales in both bases. The legs exhibited Grade III edema.

The leukocyte count was 18,400, with 2% stabs, 83% segmented neutrophils, 12% lymphocytes, and 1% monocytes. Hemoglobin was 14 gm. per cent. Urinalysis revealed 4-plus sugar, and positive acetone. Blood sugar was 288 mg. %. Corrected sedimentation rate was 36 mm. per hour. An electrocardiogram showed elevation of $ST_{2,3,}$. There was also elevation of STV_{2-6} and STAVF. There was a deep Q_3. RV_3 was absent. T_1 was inverted. There were numerous premature ventricular contractions. The tracing was interpreted as evidence of coronary thrombosis with infarction.

The patient was given an initial anticoagulant dose of 1500 mg. ethyl biscoumacetate in five divided doses administered at 3 hour intervals. The following day, the prothrombin concentration was about 80% (plasma dilution method). The initial dose was then repeated, thus reducing the prothrombin concentration to about 15%. Thereafter, the patient usually required 600 to 900 mg. ethyl biscoumacetate each day in order to keep the prothrombin concentration at the desired 10% to 30% concentration level. The daily requirement of ethyl biscoumacetate was generally given in two or three divided doses at intervals of six hours. It was our impression that the daily response to the anticoagulant was more rapid than we had been able to obtain in patients on dicoumarin. The diabetic acidosis was controlled with insulin, intravenous fluids, and diet. Other therapeutic measures included oxygen and papaverine.

Ethyl biscoumacetate was given for a total of 28 days. During this time, the patient's pain disappeared. She was allowed to become ambulatory about the fourth week and was dismissed after a month in the hospital.

Case II. O. H., a 58 year old, white male developed retrosternal discomfort a week before admission. The pain began while he was eating lunch and it increased in severity until it felt like "an ice-pick" stabbing him. It lasted for several hours and recurred every day or two until admission.

There was a past history of a "heart attack" four years previously.

Examination revealed a broad-chested, plethoric man whose temperature was 99.6°, pulse rate 76 per minute, respiratory rate 20, blood pressure 140 mm. systolic, 75 mm. diastolic. The heart was enlarged

PATIENTS TREATED WITH ETHYL BISCOUMACETATE

No.	Age	Initials	Sex	History	Physical Findings	W.B.C. and Sed. Rate	E.K.G.	Initial & Usual Daily Dosages (mgm.)	Duration of Rx (Days)	Results
1.	54	M. B.	Female	Chest Pain Radiating	"Tic-Tac Rhythm"	18,400 36	Elevated $ST_{2,3,4}$	1500 600-900	28	Dismissed
2.	58	O. H.	Male	Retrosternal pain	Duplicated apical sounds	13,200 23	Elevated ST_3	1200 600-900	16	Transferred to V. A. Hospital
3.	50	W. S.	Male	Pressing pain in chest	Cardiomegaly Tachycardia	16,300 32	Elevated $ST_{2,3}$	1800 600-1200	10	Dismissed
4.	47	H. W.	Male	Retrosternal pain	Heart tones distant	8,000 32	Elevated $ST_{2,3}$	1500 600-900	15	Transferred to V. A. Hospital
5.	62	C. L.	Male	Precordial pain	"Tic-Tac Rhythm"	30,000 9	Elevated STV_{1-5}	1500 300-600	7	Expired
6.	46	V. W.	Male	Midsternal pain	Duplicated apical sounds	7,550 37	Elevated ST_3	1500 600-900	22	Dismissed

3 cm. lateral to the left midclavicular line in the fifth intercostal space. There was duplication of the apical first sound. The liver was enlarged 1 cm. below the right costal margin. The optic fundi revealed moderate narrowing and tortuosity of the arterioles.

The leukocyte count was 13,200, with 4% stabs, 77% neutrophiles, and 19% lymphocytes. Corrected sedimentation rate was 23 mm. per hour. Chest x-ray showed moderate cardiac enlargement. An electrocardiogram showed elevation of ST_3 with deep Q_3. There was depression of $ST_{1,2,4}$, and inversion of the T waves in all leads.

It was this observer's impression that the patient had suffered a posterior myocardial infarction about a week before admission. The patient was given ethyl biscoumacetate 300 mg. orally every three hours for four doses. The following day, the prothrombin concentration was about 50%; accordingly, he was given ethyl biscoumacetate 300 mg. approximately every three hours for three doses.

The third day, the prothrombin concentration had fallen to about 20%. Thereafter, an effort was made to keep the prothrombin concentration at about the 20% level; this usually required two doses of ethyl biscoumacetate 300 mg. each. However, occasionally three doses were required. Where possible, the doses were given at intervals of three to six hours. Other therapeutic measures included oxygen and papaverine. The pain decreased. For financial reasons, the patient was transferred to a Veterans' Administration Hospital after sixteen days of ethyl biscoumacetate therapy.

DISCUSSION

It is evident from the table that our patients received 1200 to 1800 mg. of ethyl biscoumacetate as an initial dose and 600 to 900 mg. as a daily maintenance requirement generally. The maintenance requirement was usually given in divided doses. Since the prothrombin reports were available by noon each day from the laboratory, we found it convenient to give one dose of 300 mg. as soon as the report was received and another dose at bedtime; if a third dose was to be required, it was usually given in mid-afternoon.

In this preliminary study, no thrombo-embolic phenomena were observed after ethyl biscoumacetate was started. No hemorrhagic phenomena were observed in any of these patients. In the one fatality (case 5), autopsy revealed an extensive anterior infarction, but there was no evidence of hemorrhage in any organ, nor were any new thrombi or emboli observed.

It is our impression that ethyl biscoumacetate provided better and more rapid control of the prothrombin concentration than was possible with previously available oral anticoagulant medication.

COMMENT

Recently, there has been some discussion as to whether anticoagulants are indicated in all cases of myocardial infarction. The purpose of the present study was not to investigate this problem, but rather to attempt to determine the clinical usefulness of a new anticoagulant.

SUMMARY

This is a report of six cases in which ethyl biscoumacetate was used. The drug seemed to provide easier and more rapid control of prothrombin concentration than had been possible with previously available anticoagulant medication. No instances of hemorrhagic or thrombo-embolic phenomena were observed.

ACKNOWLEDGMENT

The author wishes to express his appreciation to the following physicians for their several kindnesses: Dr. W. N. Cochran, Dr. A. B. Warren, Dr. C. L. Dale, Dr. J. D. Nelson, Dr. W. J. Nelson, Dr. Tom Ryan, Dr. W. T. Hendrix, Dr. B. F. Moss, and Dr. E. B. McFadden.

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The Diagnosis of Pernicious Anemia

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In 1855 Addison presented the first clinical description of pernicious anemia so entitled because of its pernicious and fatal course. Since then the presence of achlorhydria, spinal cord changes, and the blood and bone marrow findings have been added to his excellent description of the disease. The work of Whipple, Minot, and Castle in the therapeutic use of liver and liver extract is well known. Recently Vitamin B-12 and folic acid have been investigated extensively and it now appears that Vitamin B-12 represents the hematopoietic principle which is lacking when pernicious anemia develops.

Pernicious anemia is a disease primarily of the temperate zone and of the white race, and has its greatest incidence between the ages of 40-70. It is not rare; at Cook County Hospital[1] there were 206 cases in 100,000 hospital admissions. This must be considered as fairly high when it is realized that the majority of cases do not require hospitalization.

The onset of the disease is insidious, with weakness frequently being the first complaint. At this time there is usually a severe anemia which is characteristically macrocytic in type. Neurologic disturbances such as numbness, tingling, and loss of deep sensation may or may not be present. In some cases the neurologic involvement may be severe before the anemia is discovered. Associated findings are those of a smooth, sore, tongue and a lemon yellow tint to the skin. Many cases are striking and the clinical appraisal often suffices to form a definite suspicion of pernicious anemia. The laboratory findings are those of macrocytic anemia with leukopenia and thrombocytopenia. It should be emphasized that pernicious anemia is a disease involving the entire hematopoietic system; the white cells are abnormal in form as well as lessened in number, and the platelets are usually decreased. There is absence of free HCL in the stomach. The bone marrow examination shows distinctive changes in the immature red cells with the presence of numerous megaloblasts which are easily distinguished from the erythroblasts and normoblasts which are normally found. Abnormal cells of the white cell series are also present and often when treatment has obscured the megaloblastic changes, persistant giant metamyelocytes enable the diagnosis to be made. The response to specific therapy, whether liver extract or Vitamin B-12 is also informative and this response is gauged by serial reticulocyte counts.

It is possible in many cases to make the diagnosis by means of examination of the peripheral blood in conjunction with the clinical evaluation of the patient. However, with the simplicity of diagnostic bone marrow examinations, it is always preferable to utilize bone marrow studies for certainty in diagnosis. In a certain proportion of cases, the diagnosis is not clear and sometimes not even suspected until megaloblastic erythropoiesis is found on the marrow smear. Conversely a case may be diagnosed clinically as pernicious anemia, and the marrow study may show evidence of other hematologic abnormality.

In this paper four cases are presented which illustrate different aspects of pernicious anemia with emphasis on diagnostic difficulties.

CASE I: This 30 year old white female came to the medical clinic because of weakness, dyspnea, palpitation and lack of energy for three and one half months. The symptoms began one month following the birth of her second child and had been progressive since then. The pregnancy had been uneventful except that the delivery was said to have been rather difficult. The patient's mouth had been painful and red since symptoms began, but did not bleed.

On examination the temperature was 101 degrees, pulse 85, and respirations 18 per minute. The patient was pale and appeared chronically ill. The sclerae showed a mild yellow tint. A single area of ecchymosis was seen on the left arm. There were small ulcers of the mouth and the tongue appeared smooth and atrophic. A soft systolic murmur could be heard at the apex, but the heart was otherwise normal. The lungs were clear. The spleen was easily palpable two fingers below the costal margin. Neurologic examination showed no gross motor or sensory changes.

Laboratory Data: R.B.C. 2.2 million per cu. mm. Hb. 5 gm. per 100 ml. Hematocrit 17%, W.B.C. 2,000, differential, P.M.N.'s 32%, lymphs 63%, eosinophils 5%. Platelets 118,000, reticulocyte count 0, clot retraction 1½ hours. Rumpel-Leede test moderately positive. MCV 77.3, MCH 22.7, MCHC 29.4, Bilirubin direct .35 mg. per 100 ml. and indirect 9.65 mg. per 100 ml. Gastric analysis: No free HCL, after histamine stimulation. A tentative diagnosis of hypersplenism had been made because of the panhematocytopenia and enlarged spleen. The bone marrow however, showed a megaloblastic erythropoiesis indicative of pernicious anemia. After the diagnosis was established by marrow aspiration, Vitamin B-12, 15 mg. daily was given. The patient looked and felt better and showed a reticulocyte response of 5.1% after 10 days. At this time oral iron was given in addition and after five more days the reticulocyte count reached 28.6% and there was a rapid increase of the erythrocyte count and hemoglobin to normal levels. Follow up visits to the clinic showed that the patient maintained her remission.

CASE II: This 53 year old white male was found to be anemic in October 1949, at the time of a routine check-up. The Hb. was 48.8%. It was also stated that he had been seen in the clinic several years previously and that he was anemic at that time. He was again seen in the medical clinic in December 1949, with complaints of loss of weight and increasing weakness. The weight loss had been about 25 to 30 lbs., and the weakness was so great that he could barely stand. Admission to the hospital was advised and examination at this time showed a thin male who was pale and anemic. A systolic murmur could be heard over the entire heart but there was no cardiac enlargement. The lungs were clear.

Laboratory Data: R.B.C. 0.8 million, Hb, less than 3.5 gm., white count 2,650, differential, P.M.N.'s 30%, lymphs 70%. The R.B.C. showed marked hypochromia. Hematocrit 9 mm. MCV 112.5. Feces: negative for occult blood, bone marrow aspiration was reported as showing profound hypoplasia. Patient was given numerous transfusions and the red count reached 3.34 million. A diagnosis of idiopathic aplastic anemia was made and the patient was discharged, to be followed in the clinic. He returned periodically to the clinic for six months and then was lost sight of for 1½ years. When he returned in January 1952, the Hb. was 6 gm. He was again admitted and at this time the red count was 1.8 million and the Hb. 5.5 gm. 500 cc. of blood was given immediately on admission. After several days hematologic work-up showed R.B.C. 2.38 million, Hb. 7.5 gm., W.B.C. 3,550 with P.M.N.'s 46%, lymphs 52% eosinophils 2%. Platelets 451,720, hematocrit 26. MCV 109 cu. mic., MCH 31.5 micromicrograms, MCHC 28.8%. Gastric analysis: No free HCL after histamine, reticulocytes 0.5%. The bone marrow was cellular and showed a megaloblastic erythropoiesis. Treatment with Vitamin B-12 in large doses was given and the patient discharged after 23 days in the hospital. At the time of discharge his R.B.C. was 4.08 million and Hb. 11.5 gm.

CASE III: This 60 year old white female had the gradual onset of dizzyness and numbness of her fingers over a period of two weeks. The hands would become red in color and would tingle. Later numbness and tingling of the feet became present and this gradually ascended until there was abnormality of sensation from the level of the axillae down. Recently she had been unable to walk because of incoordination and weakness. She was referred by her physician to a consultant because of her progressive signs of neurologic disturbance. Anemia had been present and among other medications she received an iron preparation and a Vitamin preparation which included folic acid in small amounts which had produced slight improvement in the anemia.

Physical examination showed ataxia. There was a positive Romberg test and vibratory sense was absent from the waist down. Pin prick and light touch were intact and the reflexes normal. X-rays of the chest and skull were normal. A gastric analysis revealed no free HCL after histamine stimulation.

Laboratory studies showed a normal urine, R.B.C. 3.19 million, Hb. 10.7 gm., Hematocrit 38, W.B.C. 5,400 with 64% polys, 29% lymphs, 1% monocytes, 6% eosinophils. MCV 116, MCH 26, MCHC 28.9. Icterus index 7.5, reticulocytes 0.4%.

A bone marrow study was requested and showed a mixed erythroblastic and a megaloblastic marrow.

Following intensive treatment with Vitamin B-12, the patient responded slowly but definitely and was continuing to improve when last seen.

CASE IV: This 59 year old white female had a 7 week history of gradually increasing weakness. Her family physician put her in bed and gave her red tablets for three weeks. The stools after this were black. Liver and Vitamin B-12 were also administered. She did not improve, had severe anorexia and became very pale. She was referred to a consultant in November 1951.

Physical examination showed an alert, somewhat over-weight white female. B.P. 130/76, pulse 84, temperature 99.4. A Grade II systolic murmur could be heard over the aortic area. The lungs were clear. There were no masses or organs palpable in the abdomen. The skin was a pale, pasty color. The extremities were normal.

Laboratory Data: The urine contained 20-30 white cells in the sediment and rare red cells. It was otherwise normal. R.B.C. 1.45 million, Hb. 3.8 gm., Hematocrit 18, MCV 123, MCHC 21.1, and MCH 26.0 W.B.C. 5,000 with P.M.N.'s 66%, 6% stabs, 28% lymphocytes. Reticulocytes 13.1%, clotting time 9 min. 31 sec., bleeding time 1 min. 5 sec. A G.I. series showed a duodenal ulcer which appeared to be active. A flat plate of the abdomen showed the presence of an enlarged spleen. Gastric analysis showed 10 degrees of free HCL in a fasting specimen. Because of the macrocytic type of anemia a clinical diagnosis of pernicious anemia was made. It was felt that the high reticulocyte count was due to previous administration of liver and Vitamin B-12 by her local physician. Bone marrow examination was not performed because of the previous therapy.

The patient was discharged from the hospital and then readmitted one month later following an episode of hemoglobinuria. On this admission a high reticulocyte count, a positive direct Coombs test, and the presence of cold hemagglutinins in high titer (1:2048) was considered diagnostic of an acquired hemolytic anemia. Bone marrow examination showed a marked erythroblastic hyperplasia. It soon became evident that the patient was hemolyzing her red blood cells rapidly and this continued until a course of ACTH was given. After the patient became stabilized, splenectomy was performed but shortly thereafter, the hemolytic process began anew. This renewed hemolytic process was at first refractory, but finally after several weeks of cortisone therapy the hemolytic process ceased, and the patient went into a complete remission which has thus far been sustained.

DISCUSSION:

In the cases which have been presented, it has been shown that pernicious anemia may simulate hypersplenism, aplastic anemia, and severe neurologic disease. A fourth case has been presented wherein a diagnosis of pernicious anemia was made and which was subsequently shown to be an acquired hemolytic anemia.

In Case I the bone marrow aspiration was made in order to complete the work-up necessary for evaluation of splenectomy. The clinical picture until then had satisfied the criteria for hypersplenism and calculation of the absolute values for MCV, MCH, MCHC had not indicated a macrocytic form of anemia. There was some response to Vitamin B-12 as shown by the 5% reticulocyte count, but great accleration of blood formation was not noticed until oral iron was also administered. This brings out the little appreciated fact that iron deficiency is frequently associated with megaloblastic anemias, and the combination may be completely confusing in diagnosis and in response to therapy if not kept in mind.

The second case illustrates an error by the hematologist who failed to recognize that the peripheral blood findings of severe pernicious anemia can be similar to those of aplastic anemia. A bone marrow aspiration obtained what was apparently peripheral blood and on the basis of this, aplastic anemia was diagnosed. Aplastic anemia is a difficult diagnosis to make and many hematologists feel that such a diagnosis is best made by two or more separate marrow aspirations, with the additional examination of marrow particles or actual biopsy of the marrow. On this patient's final admission, an alert interne recognized discrepancies in the clinical course and requested re-evaluation of the previous diagnosis. Certainly the patient is much better off with a high blood count and a favorable prognosis. He is also fortunate that spinal cord changes did not develop in the period that specific treatment was not given.

In the third case the diagnosis was made by a consultant who requested a verifying marrow study. This woman had received propriatory preparations of the type which are currently advertised and detailed by virtually every drug house. The addition of folic acid and Vitamin B-12 in small amounts to oral hematinic preparations is common despite the fact that there is little or no scientific evidence that these drugs are of any value in iron deficiency anemias and they are certainly inadequate for the treatment of pernicious anemia.[2] What does happen, particularly with the use of folic acid, is that the blood manifestations of pernicious anemia may be somewhat improved, while the spinal cord changes continue unabated and may worsen. In this instance the patient may well have been diagnosed earlier if her anemia had been more severe and possible irreversible cord changes averted.

The final case illustrates that all macrocytic anemias are not megaloblastic. Macrocytosis may be found in hemolytic anemias, aplastic anemias, sickle cell anemias, and in other diseases. The use of liver extract and Vitamin B-12 in the treatment of anemia other than those due to absence of the hematopoietic principle as in pernicious anemia is unscientific and without value. Certainly such treatment, and transfusions, should be reserved until a definite diagnosis can be made, because after therapy the bone marrow rapidly

reverts to an erythroblastic type cell and a specific diagnosis is not possible by marrow aspiration. Because such treatment had been given prior to hospitalization in this case, a marrow study was considered valueless at the time. The later course of the patient permitted the establishment of a definite diagnosis.

CONCLUSIONS:

1. Three cases are presented in which pernicious anemia simulated other diseases and in which there was a delay of varying extent before the definitive diagnosis was made. A case of acquired hemolytic anemia simulating pernicious anemia is also presented.
2. Pernicious anemia is a disease involving the entire hematopoietic system rather than the erythrocytes alone.
3. Cases of pernicious anemia may have an associated iron deficiency which will mask or obscure the diagnosis and delay the response to specific therapy.
4. Bone marrow studies before treatment are diagnostic. Pernicious anemia cannot be diagnosed with any confidence after blood transfusions, liver extract, Vitamin B-12, or folic acid have been administered. Because of this it is important to establish the diagnosis before inaugurating any treatment.
5. The use of oral "shot-gun" mixtures is entirely unnecessary, and many times is dangerous to the patient. In all cases of anemia, a definitive diagnosis must be made. Specific treatment is far superior to symptomatic therapy employing "shot-gun" medications.
6. Once treatment is undertaken for pernicious anemia, it must be continued for the lifetime of of the patient. For this reason the diagnosis should never be made without adequate study.

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CANCER

Edited by JOHN C. HAWK, JR., M.D., Charleston, S. C.

EPIDERMOID CARCINOMA OF THE VULVA

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The purpose of this paper is to present a record of the treatment of epidermoid carcinoma of the vulva at the Cancer Clinic of the Medical College of South Carolina since January 1, 1947. During this period of time 424 malignancies of the female reproductive system have been diagnosed, and of this number 18 were epidermoid carcinoma of the vulva, representing 4.3% of the malignancies of the female genitalia. No other primary malignancies of the vulva were diagnosed.

RACE

Diehl[1] reports the race incidence of 75% white, despite predominantly Negro clinics. This series, also from a predominantly Negro clinic, differs in that only 6 of the 18 patients (33%) were white, which is more in agreement with 62% Colored as reported by Lunin[2] It is of interest to note that in this clinic the ratio of the colored to white patients having epidermoid carcinoma of the vulva to those having epidermoid carcinoma of the cervix is almost identical.[3] (Table I)

TABLE I

Carcinoma of Cervix		Carcinoma of Vulva	
White	Colored	White	Colored
31.5%	68.5%	33%	67%

AGE

The average age in this series was 50.7 years, the oldest being 72 years of age, the youngest 26 years of age. This is lower than the average age as reported by Collins[4] of 54.3 years, the 53.4 years by Lunin,[2] and much lower than the 58 to 60 years reported by Taussig,[5] Graves,[6] and Folsome.[7] The age distribution is shown in Table II, and it is to be noted that 6 of the cases occurring in this series were below 40 years of age.

TABLE II

Age	No. Cases
20-29	2
30-39	4
40-49	2
50-59	4
60-69	5
70-79	1

SYMPTOMS

The initial symptoms are shown in Table III. It will be noted that itching occurred as a primary symptom in only 5 cases. This is not in accord with the generally reported opinion that itching is the usual primary symptom.[1,7] In 50% of the cases asymptomatic lesions led the patient to seek medical care. One patient sought aid because of the presence of an itching lesion, while bleeding from a vulval lesion was the primary symptom in one case. Two cases were diagnosed on routine examination for other diseases, the patients being unaware of any abnormality of the vulva.

TABLE III

Lesion only	9
Itching	5
Incidental finding	2
Bleeding & lesion	1
Itching & lesion	1

COMPLICATING DISEASES

Leukoplakia of the vulva was present in 2 patients, or 11% of the total cases, this being in agreement with Diehl,[1] who reports an incidence of 12%, thus not conforming to the usual opinion that leukoplakia is the classical precursor to carcinoma of the vulva. Diabetes mellitus was present in 3 cases; however, the significance of this could not be ascertained, but its presence led to considerable delay in treatment, since the patients were treated at length for diabetic vulvitis before the true diagnosis was made. Epidermoid carcinoma, intraepithelial, of the cervix was present in 1 case. This was diagnosed on routine cervical biopsy when no gross cervical lesion was present. In Table IX it can be seen that there is a high incidence of granulomatous diseases associated with epidermoid carcinoma of the vulva. They were present in a total of 7 cases, or 39% of the total patients, or 58% of the colored patients. The high incidence of carcinoma of the vulva superimposed on granulomatous diseases of the vulva makes apparent the necessity of a complete diagnostic survey of all ulcerative lesions of the vulva. The diagnosis of granuloma inguinale or lymphopathia venereum does not exclude the diagnosis of carcinoma, but should stimulate one to observe the patient even more closely for the coincidental development of carcinoma.

TABLE IV

Complicating Disease	No. of Patients	%
Leukoplakia	2	11
Diabetes Mellitus	3	16.5
Ca. Cervix (Stage O)	1	5.5
Granuloma Inguinale	5	27.5
Lymphopathia Venereum	1	5.5
Condyloma Accuminata	1	5.5

All patients with vulval lesions who present themselves to this clinic are subjected to what is considered a basic minimum of laboratory procedures, none of which require hospitalization. Dark field examination, smear, and culture for Ducrey bacillus are performed prior to biopsy, thus reducing the possibility of contaminating these special tests with blood and antiseptics. The laboratory procedures which are carried out are shown in Table V. We do not subscribe to cytological smear studies as advocated by Carter,[8] feeling that biopsy under local novocaine anaesthesia is simple, well tolerated, and much more accurate.

TABLE V

1. Serology, blood
2. Dark field examination
3. Smear for Ducrey bacillus
4. Smear for Donovan bodies
5. Culture for Ducrey bacillus
6. Biopsy of the lesion
7. Frei test
8. Total and fractional proteins

METHODS OF TREATMENT

Although there are isolated reports of favorable results following radium and x-ray therapy for epidermoid carcinoma of the vulva[9, 10], we are in agreement with the majority[11, 12, 13, 14, 1, 4] that radical vulvectomy and radical lymphadenectomy is the treatment of choice; therefore, x-ray therapy was used in only 1 case in this series, and that following vulvectomy and groin dissection.

In performing a radical vulvectomy, wide excision of the lesion is mandatory, without thought to primary closure. If the incision cannot be closed, then the area may be allowed to heal by secondary intention, or skin graft may be done at a later date.

In performing the radical lymphadenectomy, the superficial and deep inguinal nodes, femoral and Cloquet's nodes should be removed in block. Following their removal, the inguinal ring is opened, and the external iliac and obturator nodes are then removed. If possible, the hypogastric nodes are also removed. The inguinal ring is then closed, using interrupted sutures; following this, the dead space is packed with vaseline gauze, which is left in place from 24 to 48 hours. The groin dissection is allowed to heal by secondary intention. Attempts to close the inguinal dissection primarily following adequate lymphadenectomy have been poor, and invariably result in necrosis and breakdown of the wound. When the wound is allowed to heal by secondary intention, it is irrigated daily with Dakin's solution and is kept dry by the heat cradle. The postoperative course is much smoother with less pain; healing is rapid and clean. The patient is allowed to go home between the 10th and 20th postoperative days, for with close observation she is able to care for the granulated areas on an outpatient basis.

RESULTS OF TREATMENT

As shown in Table VI, of the malignancies in this series, 3 were deemed inoperable at the time, the longest survival being 16 months, the shortest survival 3 months. Today these cases probably would be considered operable, since we have better anaesthesia, more blood, and newer antibiotics. The patient having the shortest survival of 3 months was found at autopsy have no lymph node metastasis, and the lesion could have been easily excised by radical surgery. This patient did not die of the epidermoid carcinoma, but of the associated malnutrition and inanition.

There were 3 cases that were treated by simple vulvectomy. Of these, 2 cases were epidermoid car-

TABLE VI

Treatment	No.	Average Survival Months	No. alive & well	% alive & well	No. alive with recur.	% alive with recur.	No. dead	% dead
None	3	7.6	0	0	0	0	3	100
X-Ray	0	0	0	0	0	0	0	0
Radium	0	0	0	0	0	0	0	0
Vulvectomy	3*	28	3	100	0	0	0	0
Vulvectomy & groin (1 side only)	1	14	0	0	0	0	1	100
Rad. vul. & groin plus x-ray	1	7	0	0	0	0	1	100
Partial vul. & bil. groin	1**	7	0	0	0	0	1	100
Rad. vul. & bilat. rad. groin	9***	21.7	7	78	2	22	0	0

* Two cases intraepithelial carcinoma of vulva.
** One with simple vulvectomy done at another hospital.
*** One with abdominal perineal and total hysterectomy because of close proximity of lesion to anus and intraepithelial carcinoma of cervix.

cinoma, intraepithelial, of the vulva, and no extension was noted on multiple sections. The other vulvectomy was done as a palliative procedure in a 72 year old female; however, she is still alive and well 30 months postoperatively.

A radical bilateral groin dissection was done following a partial vulvectomy on 1 case, and one patient received x-ray therapy in addition to radical vulvectomy and lymphadenectomy. Both cases are excluded from the group who were subjected to radical surgery alone. Both were found to have lymph node metastasis, and died 7 months postoperatively.

As shown in Table V, 9 patients were subjected to a radical vulvectomy and radical lymphadenectomy. Of these 9 patients, 7 (78%) are alive and well, without recurrence. The longest survival without recurrence is 46 months postoperatively. The most recent case is alive and well 5 months after surgery. The average time postoperatively in this series is 21.7 months. Two patients (22%) are alive, but are terminal with recurrence of their original neoplasm. In both cases the recurrence was in the urethra. Initial adequate operation in these cases would have necessitated cystectomy and uretero-intestinal anastamosis.

It is interesting to observe that of the 7 patients who are alive without recurrence, none had evidence of metastasis to the regional lymph nodes on pathological examination of the surgical specimen. The 2 patients with terminal recurrence both had lymph node metastasis as well as extension into the urethra. This would indicate that (1) once lymphatic or urethral invasion has occurred, the prognosis is much poorer, and (2) our present surgery is not radical enough.

CONCLUSIONS

1. Granulamatous lesions appear to be a predisposing factor in the development of epidermoid carcinoma of the vulva.

2. An adequate systematic workup is necessary in the accurate diagnosis of ulcerative lesions of the vulva.

3. Epidermoid carcinoma, intraepithelial, of the vulva does not require radical groin dissection.

4. Invasive epidermoid carcinoma of the vulva is best treated by radical vulvectomy with radical gland dissection. If the lesion involves the urethra, bladder, and/or the rectum, anterior, posterior, or total eviscerectomy should be added to the surgical procedure.

5. No attempt should be made at primary closure of the groin dissection. It should be packed with vaseline and allowed to heal by a secondary intention.

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The Journal of the South Carolina Medical Association

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Original manuscripts, subject to approval by the Editor and the Editorial Board, are desired for publication in the Journal. They should be typewritten, double spaced, on 8½ x 11 paper. References should be complete, and only such as relate directly to statements quoted in the paper. Illustrations will be used as funds permit, or as authors are willing to bear the necessary increase in cost. Short original articles are preferred to long reviews.

Office of Publication: (In care of the Editor) ..... Florence, S. C.
Subscription Price ..... $3.00 per Year

MARCH, 1953

ANNUAL MEETING

The 1953 Annual Session of the South Carolina Medical Association will be held in Columbia May 5, 6, and 7. The Columbia Hotel will be the headquarters.

The complete program will appear in the next issue of this Journal.

THE STORY OF THE ELEPHANT

The story is told of four blind men who, never having seen an elephant, were asked to describe his shape from the information received through their sense of touch. One grabbed his trunk and declared that he was shaped like a long pole with two holes at the end, another felt his ear and claimed that he was flat like a pancake. A third, hitting the side of the elephant with the palm of his hand, maintained that he was a solid wall, while the fourth, taking hold of his tail, insisted that he belonged to the family of snakes.

Physicians assume as many and variegated forms to those who see them as did the elephant to the blind men. To some, a physician is a man of science intent solely upon a study if the disease which the patient presents, to others he is a man who is concerned with the disease and also with the person who has the disease. To some, the physician appears to be a man of means who lives his own life in a small circle of the chosen few, to others he is one with broad interests who enjoys associating with those in all walks of life. To some, the physician is just another man bent upon making a living and a good one at that, to others he is one who puts service above financial gain. To some, a physician is merely a glorified mechanic who adjusts the machinery of the physical body to promote better physical living, to others he is a personal friend who is trying to promote the more abundant life for those who come to him for help.

Each individual will judge the medical profession by what he sees in the physicians he knows.

TISSUE COMMITTEES

In no uncertain terms, Dr. Paul Hawley, Director of the American College of Surgeons, expressed his opinions concerning fee-splitting and unnecessary surgery in an interview published in the U. S. News and World Report. Newspapers and radio commentators are letting the public know just what he had to say.

Just how much fee-splitting and unnecessary surgery prevails throughout the country we do not know although we doubt that it is as extensive as one might assume from Dr. Hawley's remarks. That it does exist, however, we will readily acknowledge. And it presents a condition which must be cleaned up by the doctors themselves.

One of the best methods through which unnecessary surgery can be eliminated from our hospitals is through active tissue committees. For accreditation by the Joint Commission on Accreditation of Hospitals (which is now carrying on the work in this field formerly done by the American College of Surgeons) each hospital must have a Tissue Committee and it must be functioning.

It is the function of the Tissue Committee to compare pre-operative diagnoses with the post-operative diagnoses as furnished by the pathologist—in all cases. A record of these findings must be put in writing and given to the Executive Committee of the Staff or to the entire Staff for appraisal. In this way each hospital staff will become its own police force and if the staff fails to function the Joint Commission on Accreditation will take appropriate action if there is evidence of unnecessary or unethical surgery. It would behoove each hospital staff to activate or reactivate its Tissue Committee and see that it does what it is supposed to do.

S. C. MEDICAL ADVISORY COMMITTEE TO SELECTIVE SERVICE

The first of the Priority III men have been ordered up for induction in March 1953. These two men are 25 years of age and the youngest Priority III men registered in the State and classified IA by their local boards. As it happens one of them is an intern and the other is a first year resident. As it is the policy of the Armed Services to allow at least one year intern-

ship, it is probable that the one serving the first year internship will be deferred until the completion of his year.

There still remain in South Carolina 18 Priority I and 7 Priority II men who have secured commissions and are subject to call as reserve officers before any Priority III reserve officers will be called. There are also 20 IV-F Priority I men and 6 IV-F Priority II men whose cases are being reviewed by the Surgeon General's Office with the idea of making them available for service. There are also a few reserve officers of the Priority I and II categories who did not have to register and who have not yet been called. It appears therefore that of the reserve officers groups there are enough Priority I and II men to answer calls to about the middle of the year. However, of those who have not obtained commissions there are not available Priority I and II men to answer draft calls, therefore the calling up of Priority III men. It would therefore seem advantageous to the younger Priority III men who are IA and acceptable to apply for reserve commissions. It is to be remembered that Priority III men are to be called in accordance with age—the youngest first.

The bill for renewal of Public Law #779 (the Doctor Draft Law) has been drawn. The AMA Washington Letter No. 7 of February 13, 1953 has this to say about the amending and extending of the Doctor Draft law:

"1. All registrants except those in the present Priorities I and II to be divided into two groups. *First* to be taken, those with no military service, who would be inducted by age, with the youngest going first. *Next*, those who have had active duty, with those having the least active duty inducted first. (Those remaining in the present Priorities I and II to be called immediately on expiration of deferrals).

2. Maximum age for inductions would be maintained at 51. (A lower maximum had been discussed informally.)

3. Men called to duty as reservists would be commissioned in grades "commensurate with professional education, experience or ability;" in other words, current arbitrary limitations on numbers of higher commissions would be waived in case of medical officers.

4. Other provisions—law to expire July 1, 1955; National and State Advisory Committees continued and strengthened; World War II service with cobelligerents recognized for purposes of Doctor Draft; $100 special pay not disturbed. Reserve commissions would terminate upon completion of stipulated active service."

Frank C. Owens, M. D.

Chairman

DEATHS

GEORGE E. THOMPSON

Dr. George E. Thompson, 73, died at the Spartanburg General Hospital, January 13, after a day's illness.

A native of Holly Springs, Dr. Thompson received his medical education at Atlanta College of Physicians and Surgeons (class of 1901). Soon after graduation he established a practice at Inman and then in 1931 moved to Spartanburg, where he continued to do general practice until his death.

Dr. Thompson was loved by patient and colleague alike. In 1949, he was selected as County Doctor of the Year by his fellow physicians. He served as President of his county and district societies and as vice-president of the South Carolina Medical Association.

Dr. Thompson is survived by his wife, the former Miss Blanche Harley, one son and one daughter.

ROBERT BOYD STITH

Dr. Robert B. Stith, 41, died suddenly of a heart attack at his home in Florence on February 13.

Son of the late Dr. R. B. Stith, Dr. Stith was born in Oates. He attended Duke University and received his degree in medicine from that institution in 1935. Following interneship in New York he moved to Florence to become associated with Dr. W. R. Mead in the practice of internal medicine.

During World War 2, he served with the 38th Evacuation Hospital (the Charlotte Unit). For his exceptional and courageous conduct under fire on the Anzio Beachhead, Italy, he was awarded the Bronze Star.

Following his discharge from military service he returned to Florence to take up his work. He soon became an active participant in civic and church affairs along with his professional activities. At the time of his death he was chairman of the Florence City Board of Health, an officer in the Methodist Church, and a vice-president of the Pee Dee Medical Association.

His cheery disposition, his winsome manner, his sterling character, and his medical skill combined to make him a physician who was loved by patient and colleague alike.

Dr. Stith is survived by his wife, the former Miss Finley Plunkett, and three children.

ROBERT S. BAILEY

Dr. Robert S. Bailey, 82, died at his home in St. George on January 20 after an extended illness.

A graduate of the Medical College of S. C., Dr. Bailey served as a general practitioner and county health officer for many years. Subsequently he retired from practice and engaged in teaching. He is survived by one daughter.

CLYDE DOUGLAS CONRAD

Dr. Clyde D. Conrad, 35, died of a cerebral hemorrhage in Charleston on February 12.

Born in Winnsboro, Dr. Conrad received his education at Presbyterian College and the Medical College of S. C. (Class 1943). He became interested in Pediatrics, associating himself with the Pediatric Department of Roper and the Medical College, and at the time of his death was assistant professor of pediatrics.

Quiet and unassuming in nature, Dr. Conrad endeared himself to his little patients and their parents, and was popular with his colleagues.

Dr. Conrad is survived by his wife, the former Miss Sarah Raney, and two sons.

CHARLES WESLEY CASON

Dr. C. W. Cason, 96, died on February 2.

A native of Abbeville, Dr. Cason received his degree in medicine from the University of Georgia Medical College. Up to his retirement several years ago he carried on a general practice in Hodges. In addition to his medical work he also served as mayor of Hodges and as a member of the school board of trustees. He was also superintendent of the Sunday School at the Methodist Church for thirty years.

Dr. Cason is survived by three daughters.

FRANCIS ASBURY LAWTON

Dr. F. A. Lawton, 72, died suddenly at his home in Estill on January 18.

Dr. Lawton was a native of Abbeville. Following his medical education, he established a general practice at Estill where he carried on his work until his retirement several years ago. He was an honorary member of the Hampton county medical society.

Dr. Lawton is survived by his widow, the former Miss Tressa Stokes, and four sons.

NEWS ITEMS

Dr. Robt. A. Brown has been released from military service and has reopened offices in Greenville, with practice limited to ophthalmology.

Dr. J. F. McLaughlin, Jr. has opened an office in Ehrhardt where he will carry on a general practice. In addition to Ehrhardt, Dr. McLaughlin will serve those living in the upper part of Colleton county.

Dr. T. R. Hatfield is now practicing at Ocean Drive Beach, succeeding Dr. Croft Norton who has been called to military service.

Dr. and Mrs. Geo. Laub of Columbia have recently had a son. Dr. and Mrs. Richard Wayburn of Columbia have recently had their second daughter.

Dr. Gordon Howle, formerly of Summerton, has moved to Pickens and is associated with Dr. Gaines Cannon at the Cannon Memorial Hospital.

Dr. Wofford E. Baldwin has assumed his duties as Public Health Officer for Abbeville and McCormick counties.

Dr. Richard L. Jackson has recently opened an office in Conway. His practice will be limited to surgery.

Dr. Robt. C. Rendtdorff has joined the staff of the Laboratory of Tropical Diseases, U. S. Public Health Service, at the South Carolina State Hospital.

Four members of the Board of Trustees of the Medical College of S. C. were re-elected to four year terms by the General Assembly: Drs. Thos. Pitts of Columbia, J. D. Guess of Greenville, C. B. Johnson of Charleston, and L. P. Thackston of Orangeburg.

Dr. Edwin Crosby, Director of the Joint Commission on Accreditation of Hospitals, was a recent visitor in the state and spoke before a representative group of physicians and hospital administrators in Florence.

Dr. P. E. Myers has opened an office in Monck's Corner for the practice of general medicine.

Dr. David Birnhaum has opened his office in Aiken, devoting his time to general practice.

Dr. J. C. Hedden, director of the Spartanburg County Health Department, has been awarded a scholarship to the 1953 Trudeau School of Tuberculosis at Saranac Lake, N. Y. The scholarship entitles him to a four weeks intensive course in the diagnosis and treatment of tuberculosis.

Dr. C. W. Legerton is now associated with Dr. R. Cathcart Smith in Conway, in the practice of intrenal medicine.

Dr. Richard Baken Furman of Pinewood is receiving congratulations on the special writeup which appeared in the Columbia State in which tribute is paid to him as the oldest living practicing physician in the S. C. Medical Association.

The American Association of the History of Medicine will hold its next annual meeting at Columbus, Ohio, in conjunction with the sesqui-centennial celebration of that state on Friday, Saturday and Sunday, April 10, 11 and 12. Dr. Linden F. Edwards, Dept. of Anatomy, Hamilton Hall, Ohio State Univ., Columbus 10, Ohio, is chairman of the Program and Arrangements Committee. All interested persons are invited to attend.

The next meeting of the Southeastern Allergy Association will be held at the Andrew Jackson Hotel, Nashville, Tenn. on May 15-16. For further information write Dr. Katharine Baylis MacInnis, 1515 Bull St., Columbia, S. C., secretary.

Dr. Robert Gregg, formerly of Greenville, left in January for two years with the U. S. Army.

Appearing on the program at the meeting of the Southeastern Surgical Congress, held in Louisville, were Drs. Wm. H. Prioleau, J. M. Stallworth and Henry W. Mayo, all of Charleston.

Dr. H. H. Addlestone of Charleston, has passed the examinations given by the American Board of Roentgenology at a recent meeting in Cincinnati.

THE TEN POINT PROGRAM

M. L. MEADORS, EXECUTIVE SECRETARY AND COUNSEL

TOPFLIGHT SPEAKERS ON PROGRAM OF ANNUAL MEETING

The Committee on Scientific Program has arranged what will undoubtedly prove to be an unusually fine program for the Association's Annual Meeting, May 5, 6, and 7. Outstanding guest speakers have been secured, all of them authorities in their respective fields. The scientific session is beamed to the general practitioner and the whole of the subjects to be discussed will be of more than casual interest to the men in this field, as well as those in the specialties to which they refer.

The order of business will be the same as that followed last year, which it will be recalled, was a departure from the custom previously prevailing. The House of Delegates will meet for its first business session on the morning of Tuesday, May 5 and the afternoon of that day will be devoted to meetings of the Reference Committees. On the following day, Wednesday, the House will again convene to receive and take action upon reports from the Reference Committee and otherwise complete its business.

The first scientific session on Wednesday afternoon will be devoted to a symposium on Urological problems. Four of the most outstanding authorities in the field of Urology will participate. Dr. James G. Ravenel, Professor of Urology at the Medical College of South Carolina will act as Moderator. The following will comprise the panel: Dr. Harold P. McDonald, Atlanta, Georgia, Past President Southeastern Section of the American Urological Association; Dr. Rubin Flocks, Professor of Urology, University of Iowa; Dr. Robert Lich, Jr., Professor of Urology, University of Louisville, and Dr. Meredith Campbell, Professor of Urology Post-Graduate School of New York University, New York City. Dr. Campbell is a recognized authority on Pediatric Urology and author of "Campbell's Clinical Pediatric Urology."

The four papers will be followed by a period reserved for questions and answers and the members of the Association will be invited and urged to participate in this portion of the program.

Thursday's session will be more generalized in nature, and the speakers will include the President of the Association, a high ranking member of the medical corps of the Army, an administrative official from headquarters of the American Medical Association in Chicago, and a number of South Carolina physicians.

The program for Thursday as now arranged, will open with the Presidential address by Dr. Lawrence P. Thackston. He will be followed, and in this order, by: Leo E. Brown, Director of the Department of Public Relations and Assistant to the General Manager of the American Medical Association, General James P. Cooney, of Walter Reed Army Hospital, Dr. Robert P. Glover of Philadelphia, an authority on Cardiac-vascular surgery, and Dr. George M. Wyatt, of the Orangeburg Regional Hospital, Orangeburg.

At the concluding session on Thursday afternoon, there will be papers by several Columbia doctors, all of whom will discuss subjects of unusual interest, accompanied by case presentations. Included in this group will be Dr. William C. Cantey, Dr. Charles R. Holmes, Dr. Charles H. Epting and Dr. E. Walter Masters.

The Annual Banquet on Thursday evening will conclude the meeting. The Banquet speaker is Mr. Jimmy Arrington of Collins, Miss., well known philosophical humorist and a speaker of versatility and attractive personality.

ASSOCIATION MEMBERS INCLUDED ON GOVERNOR'S COMMISSION

Governor Byrnes has appointed a Commission to study the problem of Medical Care for the Indigent in South Carolina. The subject is of particular interest to members of the medical profession and it will be recalled that a few years ago a Committee of the Association made a study of the same problem and submitted recommendations. A bill framed and proposed by the Association at that time was submitted to the Governor for his approval but no further action was taken.

The present Commission was appointed primarily as the result of an effort begun by the South Carolina Hospital Association which is financing the study. Membership includes representatives of that organization and of the South Carolina Medical Association. Dr. Lawrence P. Thackston is Vice-chairman and included also from the Doctors' organization is Dr. John K. Webb of Greenville who headed the original Committee from the Association, and Dr. J. R. S. Siau. Mr. G. A. Buchanan, Editor of the Columbia Record, is Chairman.

This matter is one which has long needed study and planning in order that some uniform system of handling the medical care and hospitalization for Indigent citizens throughout the state might be effected. At the present time each county undertakes to handle the matter in its own way, and the experience of other states has indicated that a much more satisfactory solution can sometimes be accomplished on a statewide basis, with the counties in better financial position indirectly assisting smaller counties where too often the load of indigent care is the most burdensome. The Commission has only recently been appointed and its studies and activities are just getting under way.

LIMITATIONS OF THE SUBSCRIPTION AGREEMENT

(Fifth in a Series of Articles)

There are certain implied limitations of the Blue Shield subscription agreement which are not specifically stated. They are implied by reason of the fact that they are not included in the fee schedule. I shall mention several of these.

Except in two types of cases, consultations are not paid for. The Medical Director was inclined to allow fees for consultation in certain infrequent conditions, but the Central Professional Committee, after careful discussion, ruled that to do so would be unwise. The two conditions when consultation fees are allowed are the following: (Code Nos. 1583, 1585, 1587, 1589 and 1591). Obstetrical delivery effected by a consultant, called by the attending physician, who does not transfer the case to the consultant. In such cases, there is a division of responsibility and effort. A division of the allowed fee is only just. The Plan makes the division and so eliminates any difficulty between the two physicians or between them and the subscriber, and at the same time removes any stigma of fee splitting that might arise.

(Code No. 0159). Laminectomy for a cord lesion or ruptured disc done by one surgeon and followed by spinal fusion by another surgeon. The maximum fee of $150 is divided between the two surgeons by the Plan. The division is made on the ratio of $100, the fee for laminectomy alone, to $150, the fee for spinal fusion. Here again there is division of responsibility and of effort.

In other instances, a consultation fee is implied and is paid, however, not under the label "consultation fee." Where one surgeon performs an operation and later surgical complications arise, and he calls in another surgeon to re-operate, both surgeons are paid the fees set forth in the fee schedule. However, if the original surgeon re-operates, no second fee is allowed. An example is secondary suture of abdominal wall (Code Nos. 1260 and 1261.) The original surgeon collects no extra fee for this procedure, but if he calls in a second surgeon to do the work, the Plan allows the latter a fee of $75.

Neither the subscription agreement nor the fee schedule makes any provision for a surgical or operating assistant. There are several excellent reasons for this. The first is the fact that to do so allows great opportunities for abuse—to use an assistant so that he might collect a fee. To allow an assistant's fee would automatically increase the costs of surgery some 15 to 20 per cent, and the Plan could not stand such an increase at this time. Other facts that have a bearing on the decision to allow no assistant's fee are: so many hospitals provide intern or resident assistants, and the cost of these is a part of the per diem cost of hospitalization; the growing practice of surgeons to work in teams as partners; and the practice of one surgeon assisting another in return for like assistance when occasion arises.

Indirect blood transfusion when a part of pre-operative or post-operative care no longer demands a fee. The reason for this is the belief that it is a normal part of surgical treatment and the surgeon's part in it is so frequently simply to issue the order. Where blood transfusion is an independent surgical procedure in a medical or pediatric case, not covered by a medical-surgical subscription agreement, the stated fees are allowed. (Code Nos. 0914 and 0914A).

Similarly, cholangiography has, by action of the Central Professional Committee, been removed from the fee schedule. It is a diagnostic procedure. It is a part of postoperative care, and the greatest expense connected with it is the x-ray film, which is not covered by the Blue Shield Agreement.

The question has been raised in regard to medical diabetic control in surgery on diabetics. There is no problem when the patient is not covered by a medical-surgical agreement. He is wholly liable for medical fees. There is a problem when the patient is a subscriber under the medical-surgical agreement. However, Section 1, Paragraph D of that agreement specifically states: "No payment shall be made by the Plan for both medical and surgical services during any one hospital admission." The Plan has been interpreting this very broadly. For example, a medical case developing surgical complications requiring surgery, has been allowed the medical per call per diem charge until the date of the operation, and then has been allowed the surgical fee. This has been done for two reasons: we wish to give our subscribers every benefit that we can, and we wish to deal as liberally as we can with our participating physicians. However, we are faced all the time with cold actuarial mathematics and if our actuarial experience indicates this broad attitude to be unsafe, we shall have to strictly abide by the terms of the agreement. In that case, we shall pay either the medical man on the per diem basis or the surgeon's fee, whichever is the larger. If that should come about, there would be no extra fees for minor surgical procedures in covered medical cases.

Next month, several physician reports will be discussed to indicate the problems which arise because of incomplete or inaccurate reports, and how reports presenting difficulties are processed.

J. Decherd Guess, M. D.
Medical Director

DR. CUTTINO ATTENDS EDUCATION FOUNDATION MEETING

Dr. John T. Cuttino, Dean of the School of Medicine at the Medical College of South Carolina, is currently serving, through appointment by Dr. Thackston, President of the South Carolina Medical Association, as State Chairman for the National Foundation for Medical Education. In January he represented the State Association at the meeting of State Chairmen in Chicago, and reported an interesting, helpful and informative session.

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In burns—Plasma and electrolyte solutions can be given subcutaneously at effective rates when Alidase is employed; collapsed veins or risks of thrombosis are not a problem with this method.

Addition of Alidase to the first few cubic centimeters of fluid during hypodermoclysis speeds absorption to a degree approximating that of the intravenous route. Use of highly purified hyaluronidase in this manner avoids the well-known difficulties encountered with venoclysis, saves valuable nursing time and is more comfortable to the patient.

Hechter, Dopkeen and Yudell[1] have found that the use of hyaluronidase has "markedly increased the rates of absorption and administration of hypodermoclysis with no untoward reactions." They also found that extremely small amounts of this enzyme facilitated the absorption of fluids in that greater amounts of fluids were absorbed by the patient in a given period of time and that the localized swelling following hypodermoclysis disappeared more promptly.

Similar results with Alidase were recounted by Schwartzman, Henderson and King.[2] They observed "that absorption of various types of solutions, such as saline, glucose in saline, Hartmann's solution, Ringer's solution, penicillin, streptomycin, Adrenalin, and procaine was facilitated in every case."

In toxemias of pregnancy—Urgently-needed parenteral fluids may be administered subcutaneously with the aid of Alidase, eliminating risk of thrombosis attending repeated intravenous administration of electrolyte solutions. Alidase is the highly purified Searle brand of hyaluronidase and is accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

G. D. SEARLE & CO. *Research in the Service of Medicine*

1. Hechter, O.; Dopkeen, S. K., and Yudell, M. H.: The Clinical Use of Hyaluronidase in Hypodermoclysis, J. Pediat. 30:645 (June) 1947.
2. Schwartzman, J.; Henderson, A. T., and King, W. E.: Hyaluronidase in Fluid Administration: A Preliminary Report, J. Pediat. 33:267 (Sept.) 1948.

In his letter from which the following is quoted, Dr. Cuttino calls attention to the progress being made, and certain features of the program in its relation to South Carolina.

"In a great many of the states there is a very active program underway for the raising of money for the American Medical Education Foundation. For example, in Illinois they have added a twenty dollar a year assessment to the dues of all the members of the Illinois Medical Association and this money is to be donated to the American Medical Education Foundation fund.

"There was considerable optimism as to the future of this fund. It appears that the doctors themselves in the last year have raised $1,652,547.46. The National Fund for Medical Education has brought this total up to $3,314,696.30. So that the medical profession itself has provided just slightly under 50%. The feeling of those in charge of this drive is that this percentage will, in the future, change. It is expected that industry will participate more extensively in the donation of money when it has been shown that the need is so great that the medical profession continues to support it by private subscription.

"The program consisted of a number of talks to explain to us the background of both the fund and the foundation, so that we were brought up to date. The latter part of the program was devoted to a description of how various areas have organized their campaigns."

Referring to the need for funds in connection with expansion of the facilities at our own medical college in South Carolina, Dr. Cuttino continued:

"The point was considerably discussed as to whether a donor should give directly to his medical school or give to the Foundation. It appears that great effort should be made in the next two or three years to raise the total of the American Medical Education Foundation, since this amount of money will largely determine how generously the industries give towards the cause. On the other hand, the Foundation fund does not wish to interfere in any way with the local fund raising campaigns of medical schools, such as the dormitory project at the Medical College."

HARTSVILLE PHYSICIAN STRESSES IMPORTANCE OF INDUSTRIAL HEALTH

Dr. Edward M. Gunn, who is Medical Director for Sonoco Products in Hartsville recently attended one of the meetings on Industrial Health and upon his return was good enough to write a letter containing some very timely observations on the subject and its importance to this State. Dr. Gunn called attention to the fact that South Carolina has achieved the highest record of any State in the extent of its industrial growth in a limited period, and that industrial health and the practice of industrial medicine should be viewed in a different light in South Carolina in the years ahead. We quote extensively from his letter below:

"It has been my pleasure to attend the Thirteenth Annual Congress on Industrial Health sponsored by the Council on Industrial Health, American Medical Association, at the Drake Hotel, Chicago, January 20-22, 1953. I noted with some concern that there was no official representative of the South Carolina Medical Association present, hence, with due apologies to our association and with no assumption of responsibility, I let it be known that South Carolina medicine was present.

"The problems, progress, and future of industrial health and medicine are important and definite. I am distinctly interested in this field and the growth of industry in South Carolina makes it a matter of interest and importance in our state. Management, labor, and medicine are being represented at an increasing number of meetings throughout the country. Many times the sessions participated in by these groups become important debates which indicate many changes which are likely to involve our concept of medicine.

"I believe we of the South Carolina Medical Association would do well to increase our interest in and encourage the activities of the Association's Committee on Industrial Health, in order to assure a proper understanding of the place industrial medicine and health occupies now and how it will continue to improve the quality and effectiveness of overall medical care in each community. Further, I would like to suggest that a portion of our program for 1953 Annual Meeting scheduled for Columbia be devoted to various aspects of industrial medicine as it is developing today."

Associated with her husband in the practice of medicine in Hartsville is Dr. Audrey H. Gunn, likewise a member of the South Carolina Medical Association.

PHYSICIANS ASKED TO AID

During the clinical session of the American Medical Association in Denver, the attention of the Board of Trustees was called to the fact that in some areas it is customary for physicians to watch statements unfavorable to medicine in newspaper editorials, public addresses and elsewhere. When such remarks come to the attention of one of the physicians, he seeks the responsible person and attempts to impart truthful information concerning the subject in question. The action has, in some instances, it is said, resulted in public retraction of the statement.

The Board of Trustees approved the idea in principle and expressed the belief that it can be implemented with success on the local level. This was made the subject of a communication from the office of the Secretary and General Manager, to the State Associations and was presented to the Council of the South Carolina Medical Association, at its meeting on February 11 where it was again approved in principle.

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1. Reich, W. J., et al. (1952), A Recent Advance in Estrogen Therapy. II. American J. Obst. & Gynec., 64-174, July

combat erroneous and untruthful public statements is at the source, and no individual is in a better position to do so than a doctor living in the area where it occurs. Any such approach, of course, should be tactful and in a reasonable attitude, based usually on the assumption that the statement must have been made without malicious intent, and because of some misunderstanding or misconstruction of the facts in the case in question.

VOLUNTARY PENSION PLANS

During the first week of the 83d Congress bills were again introduced to permit tax deferments on amounts used to purchase retirement annuities. These measures, H.R. 10 and H.R. 11, which were introduced by Mr. Jenkins of Ohio and Mr. Keogh of New York, are identical with the "Keogh-Reed" bills of the 82d Congress. The bills are designed to encourage the establishment of voluntary pension plans by individuals and to provide more equitable tax treatment for self-employed persons. The bills in their present form now include all the amendments suggested by the American Medical Association at hearings on the original legislation last May.

Through amendment of the Federal Internal Revenue Code, the bills would allow physicians and other self-employed individuals to deduct from their taxable income those amounts used each year to finance restricted retirement plans. Employed persons not covered by existing pension plans also would qualify for the tax deduction privilege.

Income received later during the years of retirement, either from pension funds or insurance annuities, would be taxable under the prevailing rates. In other words, they provide tax deferment but not tax avoidance.

Physicians, dentists, lawyers, architects, farmers, store owners and the many others who comprise the nation's self-employed have long been neglected in federal tax legislation relating to pensions. The purpose of these bills is to eliminate the discrimination and inequities existing under present tax laws. By extending the tax deferment privilege to the country's ten million self-employed, and also to millions of employees who are not covered by pension plans, this new legislation will give them the incentive to save for old age during their best earning years.

Under Section 165 (a) of the 1942 Revenue Act, millions of employees covered by more than 16,000 approved pension plans are already receiving the benefit of pension tax deferment. They pay no tax during their working years on the employer's contribution to their retirement fund, even though it actually is extra compensation to the employee. After he retires, however, the employee must pay the tax on the part of the retirement benefit which was financed by the employer.

To provide a similar tax arrangement for self-employed persons, the bills would allow annual deductions of 10 per cent of earned net income, or $7,500, whichever is smaller. Total deductions during a taxpayer's lifetime could not exceed $150,000. The funds excluded from taxable income would have to be paid either to a trust fund established by an association for the benefit of its members or to an insurance company as premiums for a retirement annuity contract. In either case, no income payments or cash refunds could be made before the age of 65 except in cases of total disability or death.

The bills include a provision enabling persons already between the ages of 55 and 75 to make larger annual deductions than the basic 10 per cent or $7,500. This is a practical equivalent to the past service credits allowed in many employee pension plans. The bills also provide for a carry-over of unused deductions for a period up to five years. This is designed to give equitable treatment to persons with extreme fluctuations in income.

This legislation will be of particular benefit to physicians who go through a long and costly period of training and whose peak earnings are bunched into a comparatively short period of years when they are subject to high income tax rates.

This legislation, which has the approval of the American Medical Association and twenty other national organizations, can be enacted by the 83d Congress if physicians and all other self-employed persons work actively together for its passage.

TB SYMPOSIUM FOR GP'S IN SARANAC LAKE NEXT SUMMER

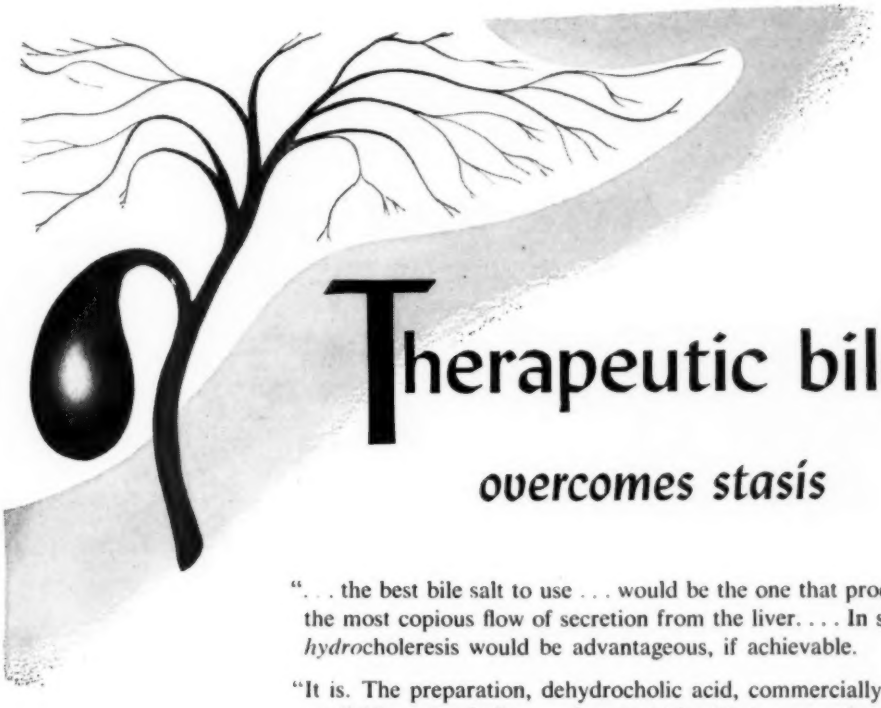
The Second Annual Tuberculosis Symposium for General Practitioners will be held in Saranac Lake, New York from July 13 through 17, 1953. It is approved by the American Academy of General Practice for 26 hours of formal credit for its members.

The Symposium is sponsored by the Saranac Lake Medical Society and the Adirondack Counties Chapter of the New York State Academy of General Practice. The registration fee is $40 for A. A. G. P. members and $50 for non-members. Registration is limited to 100 doctors.

Many physicians who attended last year's symposium brought their families to Saranac Lake. So that families might have use of the car to enjoy the many recreational facilities of the Adirondack Mountains, free bus transportation was provided for physicians from Saranac Lake to the various meeting places. This practice will be followed again this year.

Many of the sessions are informal panel discussions with ample opportunities for questions from the audience.

The Symposium will be held in various sanatoria and laboratories in the Saranac Lake area. Morning sessions will be from 8:30 to 12:30 and afternoon sessions from 2:00 to 3:30 (Monday, Wednesday, and Thursday). There will be elective sessions on Tuesday and Friday afternoons. Physicians desiring to make patient rounds will have that opportunity each after-



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*Beckman, H.: Pharmacology in Clinical Practice, Philadelphia, W. B. Saunders Company, 1952, p. 361.

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noon at 4:00. On Monday, July 13th there will be a dinner for physicians attending the course, their families and the faculty.

The speakers and panel members at the Tuberculosis Symposium will include physicians, surgeons and scientists from Saranac Lake and surrounding areas.

Complete information can be obtained by writing: Richard P. Bellaire, M. D., Tuberculosis Symposium for General Practitioners, P. O. Box 707, Saranac Lake, New York.

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